



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/517,132

12/06/2004

Shaily Verma

PU020265

6857

24498 7590 04/26/2010
Robert D. Shedd, Patent Operations
THOMSON Licensing LLC
P.O. Box 5312
Princeton, NJ 08543-5312

EXAMINER

SHAND, ROBERTA A

ART UNIT

PAPER NUMBER

2472

MAIL DATE

DELIVERY MODE

04/26/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/517,132	Applicant(s) VERMA ET AL.	
	Examiner Roberta A. Shand	Art Unit 2472	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-4, 7-9, 11-18, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lucidarme (U.S. 2002/0181468 A1) in view of Kavanagh (U.S. 2003/0081607 A1) further in view of Katz (U.S. 2006/0291455 A1) and yet further in view of Lindholm (U.S. 6957065 B1).

4. Regarding claims 1, 15 and 23. Lucidarme teaches (fig. 1) an apparatus and method for supporting an interworking a mobile communications system, the mobile communications system having a first support node (30, 31) for interfacing a radio access network (22) to a core network (21) and a second support node (32) for interfacing the mobile communications system

Art Unit: 2472

to a second communications system (12), the method comprising the steps of: establishing at least one tunneling protocol (paragraph 43)

5. While Lucidarme teaches GTP, Lucidarme does not teach user plane tunnel between the IWF and the second support node for transferring data signals; and establishing at least one tunneling protocol - control plane tunnel between the first support node and the second support node for transferring control signals.

6. Kavanagh teaches (paragraph 9) user plane tunnel for transferring data signals; and establishing at least one control plane tunnel between the first support node and the second support node for transferring control signals. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lucidarme to include Kavanagh's to provide separate protocols used in the core network for signaling.

7. Lucidarme and Kavanagh do not teach internetworking between a WLAN and a mobile communication network and providing an IWF associated with the WLAN and coupled to the mobile communications system.

8. Katz teaches (paragraphs 511-516) internetworking between a WLAN and a mobile communication network and providing an Internetworking function (fig. 30, MSC) associated with the WLAN and coupled to the mobile communications system. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lucidarme and Kavanagh to include Katz's WLAN mobile network internetworking to provide an interface between PLMN and non-PLMN networks (abstract).

9. Lucidarme, Kavanagh and Katz do not teach GTP involving an IWF.

Art Unit: 2472

10. Lindholm teaches (col. 5, lines 45-48) GTP involving an IWF (IWU). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lucidarme, Kavanagh and Katz to include Lindholm's GTP services via the IWU to the PLMN to provide necessary conversion of messages.

11. Regarding claims 2 and 10, Kavanagh teaches (fig. 2 and paragraph 9) the mobile communications network comprises a UMTS network the first support node comprises SGSN (15), the second support node comprises a GGSN (22), the tunneling protocol - user plane tunnel comprises a GPRS tunneling protocol - user plane (GTP-User Plane) tunnel, and the tunneling protocol - control plane tunnel comprises a GPRS tunneling protocol - control plane (GTP-Control Plane) tunnel.

12. Regarding claims 3 and 17, Lucidarme teaches (fig. 1) the IWF is configured as a logical SGSN with respect to the data signals.

13. Regarding claims 4 and 18, Lucidarme teaches (paragraph 62) defining a GTP tunnel in a GTP-U for at least one PDP context in at least one of the GGSN and the IWF.

14. Regarding claims 7 and 21, Lucidarme teaches (paragraph 43) a GTP-C carries GPRS mobility management functions.

Art Unit: 2472

15. Regarding claims 8 and 22, Katz teaches (fig. 6) providing access to both the WLAN and the mobile communications system through a single point of attachment consisting of the GGSN (76).

16. Regarding claim 9, Lucidarme teaches (fig. 1) core network includes, the GGSN (32) and the SGSN (31, 31), and maintaining a connection between a UE (23) and the core network (21) while diverting data to the UE (23) through the at least one GTP-U tunnel between the GGSN (32) and the IWF (BSC, RNC).

17. Regarding claim 11, Katz teaches (paragraphs 32-33) authenticating a UE by the mobile communications network; communicating a result of said authenticating step to the IWF through the GGSN.

18. Regarding claim 12, Lucidarme teaches (paragraphs 62-70) the steps of: registering a coverage area as a different Routing Area with the mobile communications network; and specifying an address and Tunnel Endpoint Identifiers (TEIDs) for said step of establishing the at least one GTP-U tunnel, when one of a Packet Data Protocol request of a modify PDP request is received from a User Equipment.

19. Regarding claim 13, Lucidarme teaches (paragraph 43) the steps of employing the GGSN as a Foreign Agent to handle UE mobility; and informing the SGSN to establish the at least one GTP-U tunnel.

Art Unit: 2472

20. Regarding claim 14, Katz teaches (paragraph 236) the step of employing encryption used by the mobile communications network for a user connecting to the WLAN.

21. Regarding claim 24, Lucidarme teaches (paragraphs 62-70) means for registering a wireless local area network coverage area as a new routing area comprises forwarding a packet data protocol context request to said serving GPRS support node.

22. Regarding claim 25, Lucidarme teaches (paragraphs 62-70) means for registering a wireless local area network coverage area as a new routing area comprises forwarding a modify packet data protocol context request to said serving GPRS support node.

23. Regarding claim 26, Lucidarme teaches (paragraphs 62-70) for registering a wireless local area network coverage area as a new routing area further comprises means for receiving a packet data protocol context accept response from said serving GPRS support node.

24. Regarding claim 27, Lucidarme teaches (paragraphs 62-70) means for registering a wireless local area network coverage area as a new routing area further comprises receiving a modified packet data protocol context accept response from said serving GPRS support node.

Art Unit: 2472

25. Claims 5, 6, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lucidarme in view of Kavanagh further in view of Katz yet further in view of Lindholm and yet further in view of Hurtta (U.S. 7054945 B2).

26. Regarding claims 5 and 19, as mentioned above Lucidarme Kavanagh, Katz and Lindholm teach all of the limitations of claim 1.

27. Lucidarme Kavanagh, Katz and Lindholm do not explicitly teach defining a GTP tunnel in a GTP-C for at least one Radio Access Bearer (RAB).

28. Hurtta teaches (col. 2, lines 28-29) RAB. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lucidarme Kavanagh, Katz and Lindholm to include Hurtta's RAB to provide security in the network.

29. Regarding claims 6 and 20, Lucidarme teaches (paragraphs 62-70) defining a GTP tunnel in a GTP-C for at least one PDP context with a same PDP address and APN for tunnel management messages.

Response to Arguments

30. Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 2472

Conclusion

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberta A. Shand whose telephone number is 571-272-3161. The examiner can normally be reached on M-F 9:00am-5:30pm.

32. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

33. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Roberta A. Shand
/R. A. S./
Examiner, Art Unit 2472

/William Trost/
Supervisory Patent Examiner, Art Unit 2472